Practice: 313 - Waste Storage Facility

Scenario # 1 **Earthen Storage Facility -Onsite Borrow**

Scenario Description: **Missouri**

An earthen waste impoundment constructed with cuts and fills balanced such that one half of the impoundment depth is excavated and the remainder of the storage is created with the embankment. The structure is constructed with on site material to store wastes such as manure, wastewater, and contaminated runoff as part of an agricultural waste management system. This practice will address soil and water quality by reducing the pollution potential for surface water and groundwater quality degradation. Payment includes materials and equipment necessary for construction of the storage structure. If a roof is to be included in the installation, refer to Practice Standard 367 - Roofs and Covers. If an earthen storage liner is to be included in the installation, refer to associated Practice Standards 521A, 521B, 521C, or 521D. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). Adequately protect liner at agitation and access points.
Potential Associated Practices: Pond Sealing or Lining, Bentonite Sealant (521C), Pond Sealing or Lining, Compacted Clay Treatment (521D), Pond Sealing or Lining, Flexible Membrane (521A), Pond Sealing or Lining, Soil Dispersant (521B), Fence (382), Critical Area Planting (342), Nutrient Management (590), Waste Transfer (634), Heavy Use Area Protection (561), Roofs and Covers (367), and Solid/Liquid Waste Separation Facility (632), Waste Treatment (629) .

Before Practice Situation:

Operator presently has a confined animal feeding operation without a waste management system adequate to handle the waste stream leaving the animal production facilities. Manure and other agricultural waste by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources.

After Practice Situation:

An earthen storage structure constructed from on-site material provides an environmentally safe facility for storing manure and other agricultural waste by-products. This facility provides the landowner a means of storing waste until it can be utilized in a proper manner in accordance with a nutrient management plan. Typical design size: design storage volume 121,200 ft3; 150'X150' (top); 3:1 inside and outside side slopes; embankment topwidth = 10'; compaction ratio = 1.1; total depth = 10' (design depth = 8.5'); (not inclued in volume - 1' freeboard and 0.5' sludge accumulation); embankment volume = 4*160*((10+70)/2)*10*1.1

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	121200	Cubic Foot	Tot Unit Cost	$0.18

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Structural steel tubing, 2" diameter	8	Foot	$3.40	$27.20
Equip./Install.	Stripping and stockpiling, topsoil	741	Cubic Yard	$0.83	$615.03
Equip./Install.	Excavation, common earth, large equipment,	2519	Cubic Yard	$3.49	$8,791.31
Equip./Install.	Earthfill, Roller Compacted	3260	Cubic yard	$3.62	$11,801.20
Mobilization	Mobilization, medium equipment	4	Each	$200.43	$801.72
				Total Cost:	$22,036.46

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$0.14	EQIP-HU	$0.16
EQIP-MRBI	$0.14	EQIP-HUMRBI	$0.16
EQIP-NOI	$0.14	EQIP-HUNOI	$0.16

Practice: 313 - Waste Storage Facility

Scenario # 2 **Glass Lined Steel Tank - <25,000 Cu Ft Storage**

Scenario Description: **Missouri**

An above ground circular glass lined steel structure constructed to store wastes such as manure, wastewater, and contaminated runoff as part of an agricultural waste management system. This scenario has a design storage volume of less than 25,000 Cu Ft. Payment includes materials and equipment necessary for construction of the storage structure and support. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). This practice will address soil and water quality by reducing the pollution potential for surface water and groundwater quality degradation.

Potential Associated Practices: Fence (382), Critical Area Planting (342), Nutrient Management (590), Waste Transfer (634), Roof and Covers (367), Heavy Use Area Protection (561), Solid/Liquid Waste Separation Facility (632), Waste Treatment (629), and Pumping Plant (533).

Before Practice Situation:

Operator presently has a confined animal feeding operation without a waste management system adequate to handle the waste stream leaving the animal production facilities. Manure and other agricultural waste by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources.

After Practice Situation:

An above ground storage structure provides an environmentally safe facility for storing manure and other agricultural waste by-products. This facility provides the landowner a means of storing waste until it can be utilized in a proper manner in accordance with a nutrient management plan. Typical design size : design storage volume 12,000 ft3, (not included - 1' freeboard); based on 31' X 19' glass lined steel tank

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	12000	Cubic Foot	Tot Unit Cost	$2.77

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waste Storage, Glass lined steel structure	12000	Cubic Foot	$1.94	$23,280.00
Materials	Aggregate, Gravel, Graded	20	Cubic yard	$24.76	$495.20
Equip./Install.	Concrete, CIP, formed reinforced	16	Cubic yard	$402.08	$6,433.28
Equip./Install.	Concrete, CIP, formless, non reinforced	12	Cubic yard	$124.22	$1,490.64
Equip./Install.	Excavation, common earth, large equipment,	80	Cubic Yard	$3.49	$279.20
Equip./Install.	Earthfill, Roller Compacted	80	Cubic yard	$3.62	$289.60
Mobilization	Mobilization, medium equipment	4	Each	$200.43	$801.72
Mobilization	Mobilization, very small equipment	2	Each	$55.50	$111.00
				Total Cost:	$33,180.64

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$2.07	EQIP-HU	$2.49
EQIP-MRBI	$2.07	EQIP-HUMRBI	$2.49
EQIP-NOI	$2.07	EQIP-HUNOI	$2.49

Practice: 313 - Waste Storage Facility

Scenario # 3 **Glass Lined Steel Tank - 25,000 - 99,999 Cu Ft Storage**

Scenario Description: **Missouri**

An above ground circular glass lined steel structure constructed to store wastes such as manure, wastewater, and contaminated runoff as part of an agricultural waste management system. This scenario has a design storage volume 25,000 Cu Ft to 99,999 Cu Ft. Payment includes materials and equipment necessary for construction of the storage structure and support. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). This practice will address soil and water quality by reducing the pollution potential for surface water and groundwater quality degradation.

Potential Associated Practices: Fence (382), Critical Area Planting (342), Nutrient Management (590), Waste Transfer (634), Roof and Covers (367), Heavy Use Area Protection (561), Solid/Liquid Waste Separation Facility (632), Waste Treatment (629), and Pumping Plant (533).

Before Practice Situation:

Operator presently has a confined animal feeding operation without a waste management system adequate to handle the waste stream leaving the animal production facilities. Manure and other agricultural waste by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources.

After Practice Situation:

An above ground storage structure provides an environmentally safe facility for storing manure and other agricultural waste by-products. This facility provides the landowner a means of storing waste until it can be utilized in a proper manner in accordance with a nutrient management plan. Typical design size : design storage volume 66,000 ft3, (not included - 1' freeboard); based on 73' X 19' glass lined steel tank

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	66000	Cubic Foot	Tot Unit Cost	$2.16

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waste Storage, glass lined steel structure,	66000	Cubic Foot	$1.72	$113,520.00
Materials	Aggregate, Gravel, Graded	91	Cubic yard	$24.76	$2,253.16
Equip./Install.	Concrete, CIP, formed reinforced	38	Cubic yard	$402.08	$15,279.04
Equip./Install.	Concrete, CIP, formless, non reinforced	65	Cubic yard	$124.22	$8,074.30
Equip./Install.	Excavation, common earth, large equipment,	365	Cubic Yard	$3.49	$1,273.85
Equip./Install.	Earthfill, Roller Compacted	365	Cubic yard	$3.62	$1,321.30
Mobilization	Mobilization, medium equipment	4	Each	$200.43	$801.72
Mobilization	Mobilization, very small equipment	2	Each	$55.50	$111.00
				Total Cost:	$142,634.37

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$1.62	EQIP-HU	$1.95
EQIP-MRBI	$1.62	EQIP-HUMRBI	$1.95
EQIP-NOI	$1.62	EQIP-HUNOI	$1.95

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Scenario # 4 Glass Lined Steel Tank - ≥100,000 Cu Ft Storage

Scenario Description: **Missouri**

An above ground circular glass lined steel structure constructed to store wastes such as manure, wastewater, and contaminated runoff as part of an agricultural waste management system. This scenario has a design storage volume ≥100,000 Cu Ft. Payment includes materials and equipment necessary for construction of the storage structure and support. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). This practice will address soil and water quality by reducing the pollution potential for surface water and groundwater quality degradation.

Potential Associated Practices: Fence (382), Critical Area Planting (342), Nutrient Management (590), Waste Transfer (634), Roof and Covers (367), Heavy Use Area Protection (561), Solid/Liquid Waste Separation Facility (632), Waste Treatment (629), and Pumping Plant (533).

Before Practice Situation:

Operator presently has a confined animal feeding operation without a waste management system adequate to handle the waste stream leaving the animal production facilities. Manure and other agricultural waste by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwater resources.

After Practice Situation:

An above ground storage structure provides an environmentally safe facility for storing manure and other agricultural waste by-products. This facility provides the landowner a means of storing waste until it can be utilized in a proper manner in accordance with a nutrient management plan. Typical design size : design storage volume 156,000 ft3, (not included - 1' freeboard); based on 112' X 19' glass lined steel tank

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	156000	Cubic Foot	Tot Unit Cost	$2.00

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waste Storage, glass lined steel structure,	156000	Cubic Foot	$1.65	$257,400.00
Materials	Aggregate, Gravel, Graded	203	Cubic yard	$24.76	$5,026.28
Equip./Install.	Concrete, CIP, formed reinforced	59	Cubic yard	$402.08	$23,722.72
Equip./Install.	Concrete, CIP, formless, non reinforced	152	Cubic yard	$124.22	$18,881.44
Equip./Install.	Excavation, common earth, large equipment,	810	Cubic Yard	$3.49	$2,826.90
Equip./Install.	Earthfill, Roller Compacted	810	Cubic yard	$3.62	$2,932.20
Mobilization	Mobilization, medium equipment	4	Each	$200.43	$801.72
Mobilization	Mobilization, very small equipment	2	Each	$55.50	$111.00
				Total Cost:	$311,702.26

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$1.50	EQIP-HU	$1.80
EQIP-MRBI	$1.50	EQIP-HUMRBI	$1.80
EQIP-NOI	$1.50	EQIP-HUNOI	$1.80

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Scenario # 5 **Dry Stack Facility - Earthen Floor with Concrete Side Walls**

Scenario Description: **Missouri**

This scenario consists of a dry stack facility with compacted earthen floor with concrete side walls. This scenario is intended for poultry litter or similar dry product. Payment includes materials and equipment necessary for construction of the floor and walls. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). The purpose of this practice is to properly store manure and other agricultural by-products until they can be hauled away from the site for proper disposal or utilization on land at agronomical rates. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water.

Potential Associated practices: 342-Critical Area Planting, 362-Diversion, 561-Heavy Use Area Protection, 367-Roofs and Covers, 558-Roof Runoff Structure, 317-Composting Facility, 633-Waste Recycling, 634-Waste Transfer, 635-Vegetated Treatment Area

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

The typical is 40' x 56' slab with walls. The earthen floor will be prepared by stripping the top 1' of soil and roller compacting it back into floor. Walls are 5' reinforced concrete. Walls consist of three permimeter walls (40' + 56' + 40') plus two 30' interior walls to create bins for storage for a total wall length of 196 linear feet. Walls allow for greater storage volume. Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan.

Scenario Feature Measure:

Cubic Foot Storage

Scenario Typical Size:	11200	Cubic Foot	Tot Unit Cost	$1.34

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Equip./Install.	Earthfill, Roller Compacted	83	Cubic yard	$3.62	$300.46
Equip./Install.	Concrete, CIP, formed reinforced	35	Cubic yard	$402.08	$14,072.80
Equip./Install.	Excavation, Common Earth, side cast, small	83	Cubic yard	$1.96	$162.68
Mobilization	Mobilization, small equipment	2	Each	$136.80	$273.60
Mobilization	Mobilization, medium equipment	1	Each	$200.43	$200.43
				Total Cost:	$15,009.97

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$1.01	EQIP-HU	$1.21
EQIP-MRBI	$1.01	EQIP-HUMRBI	$1.21
EQIP-NOI	$1.01	EQIP-HUNOI	$1.21

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Scenario # 6 **Dry Stack Facility - Concrete Floor without Side Walls**

Scenario Description: **Missouri**

This scenario consists of a dry stack facility with reinforced concrete floor without side walls. This scenario is intended for situations where consistency of manure or geographical conditions prohibit earthen floors. Payment includes materials and equipment necessary for construction of the floor. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). The purpose of this practice is to properly store manure and other agricultural by-products that are stackable until they can be hauled away from the site for proper disposal or utilization on land at agronomical rates. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water.

Potential Associated practices: 342-Critical Area Planting, 362-Diversion, 561-Heavy Use Area Protection, 367-Roofs and Covers, 558-Roof Runoff Structure, 317-Composting Facility, 633-Waste Recycling, 634-Waste Transfer, 635-Vegetated Treatment Area

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

The typical is 75'x226'. The facility floor is 5" reinforced concrete without side walls. Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan.

Scenario Feature Measure:

Square Foot Floor Area

Scenario Typical Size:	16950	Square Foot	Tot Unit Cost	$4.35

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Aggregate, Gravel, Graded	206	Cubic yard	$24.76	$5,100.56
Equip./Install.	Concrete, CIP, slab on grade, reinforced	260	Cubic yard	$253.20	$65,832.00
Equip./Install.	Earthfill, Roller Compacted	315	Cubic yard	$3.62	$1,140.30
Equip./Install.	Excavation, Common Earth, side cast, small	630	Cubic yard	$1.96	$1,234.80
Mobilization	Mobilization, medium equipment	2	Each	$200.43	$400.86
				Total Cost:	$73,708.52

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$3.26	EQIP-HU	$3.91
EQIP-MRBI	$3.26	EQIP-HUMRBI	$3.91
EQIP-NOI	$3.26	EQIP-HUNOI	$3.91

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Scenario # 7 **Dry Stack Facility - Concrete Floor with Concrete Side Walls**

Scenario Description: **Missouri**

This scenario consists of a dry stack facility with reinforced concrete floor and concrete side walls. This scenario is intended for situations where consistency of manure or geographical conditions prohibit earthen floors. Payment includes materials and equipment necessary for construction of the floor and walls. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). The purpose of this practice is to properly store manure and other agricultural by-products that are stackable until they can be hauled away from the site for proper disposal or utilization on land at agronomical rates. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water.

Potential Associated practices: 342-Critical Area Planting, 362-Diversion, 561-Heavy Use Area Protection, 367-Roofs and Covers, 558-Roof Runoff Structure, 317-Composting Facility, 633-Waste Recycling, 634-Waste Transfer, 635-Vegetated Treatment Area

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

The typical is 40' x 56' concrete slab with 5' high bin dividers. The facility floor is 5" reinforced concrete with 5' reinforced concrete walls. Walls allow for greater storage volume. Walls consist of three permimeter walls (40' + 56' + 40') plus two 30' interior walls to create bins for storage for a total wall length of 196 linear feet. Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan.

Scenario Feature Measure:

Cubic Foot Storage

Scenario Typical Size:	11200	Cubic Foot	Tot Unit Cost	$2.19

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Aggregate, Gravel, Graded	28	Cubic yard	$24.76	$693.28
Equip./Install.	Concrete, CIP, formed reinforced	35	Cubic yard	$402.08	$14,072.80
Equip./Install.	Concrete, CIP, slab on grade, reinforced	35	Cubic yard	$253.20	$8,862.00
Equip./Install.	Earthfill, Roller Compacted	83	Cubic yard	$3.62	$300.46
Equip./Install.	Excavation, Common Earth, side cast, small	83	Cubic yard	$1.96	$162.68
Mobilization	Mobilization, medium equipment	2	Each	$200.43	$400.86
				Total Cost:	$24,492.08

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$1.64	EQIP-HU	$1.97
EQIP-MRBI	$1.64	EQIP-HUMRBI	$1.97
EQIP-NOI	$1.64	EQIP-HUNOI	$1.97

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Scenario # 8 ConcreteLid Tank - <1,000 Cu Ft Storage

Scenario Description: **Missouri**

This scenario consists of installing a small concrete tank with a solid lid and a design storage volume of less than 1,000 Cu Ft. Design volume does not include freeboard. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Payment includes all materials, equipment and labor to install a concrete lid tank and gravel for drainfill around the tank.
Potential Associated Practices: Pond Sealing or Lining, Bentonite Sealant (521C), Pond Sealing or Lining, Compacted Clay Treatment (521D), Pond Sealing or Lining, Flexible Membrane (521A), Pond Sealing or Lining, Soil Dispersant (521B), Fence (382), Critical Area Planting (342), Nutrient Management (590), Access Road (560), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Diversion (362), Subsurface Drain (606), Pumping Plant (533),and Underground Outlet (620).

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan. Tank typically 5' deep x 8' wide x 9' long, with a design storage volume of 288 cubic feet plus 1 ft freeboard. Sizing based on manure, other wastes, rainfall, lot runoff, etc. Volume does not include 1 ft of freeboard. Tanks associated with open lots sized to handle design storm in tank or in combination with lot as per state regulations.

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	288	Cubic Foot	Tot Unit Cost	$16.90

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waterstop, PVC, ribbed, 3/16" x 6"	68	Foot	$4.60	$312.80
Materials	Aggregate, Gravel, Graded	4	Cubic yard	$24.76	$99.04
Equip./Install.	Concrete, CIP, formed reinforced	6	Cubic yard	$402.08	$2,412.48
Equip./Install.	Earthfill, Manually Compacted	60	Cubic yard	$4.83	$289.80
Equip./Install.	Hydraulic Excavator, 1 CY	10	Hour	$96.78	$967.80
Labor	Equipment Operators, Heavy	10	Hour	$27.22	$272.20
Mobilization	Mobilization, medium equipment	2	Each	$200.43	$400.86
Mobilization	Mobilization, very small equipment	2	Each	$55.50	$111.00
				Total Cost:	$4,865.98

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$12.67	EQIP-HU	$15.21
EQIP-MRBI	$12.67	EQIP-HUMRBI	$15.21
EQIP-NOI	$12.67	EQIP-HUNOI	$15.21

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Scenario # 9 Concrete Lid Tank - ≥1,000 Cu Ft Storage

Scenario Description: **Missouri**

This scenario consists of installing a small concrete tank with a solid lid and a design storage volume of greater than or equal to 1,000 Cu Ft. Design volume does not include freeboard. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Payment includes all materials, equipment and labor to install a concrete lid tank and gravel for drainfill around the tank.
Potential Associated Practices: Pond Sealing or Lining, Bentonite Sealant (521C), Pond Sealing or Lining, Compacted Clay Treatment (521D), Pond Sealing or Lining, Flexible Membrane (521A), Pond Sealing or Lining, Soil Dispersant (521B), Fence (382), Critical Area Planting (342), Nutrient Management (590), Access Road (560), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Diversion (362), Subsurface Drain (606), Pumping Plant (533),and Underground Outlet (620).

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan. Tank typically 8' deep x 12' wide x 40' long, with a design storage volume of 3,360 cubic feet plus 1 ft freeboard. Sizing based on manure, other wastes, rainfall, lot runoff, etc. Volume does not include 1 ft of freeboard. Tanks associated with open lots sized to handle design storm in tank or in combination with lot as per state regulations.

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	3360	Cubic Foot	Tot Unit Cost	$5.85

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waterstop, PVC, ribbed, 3/16" x 6"	104	Foot	$4.60	$478.40
Materials	Aggregate, Gravel, Graded	14	Cubic yard	$24.76	$346.64
Equip./Install.	Concrete, CIP, formed reinforced	35	Cubic yard	$402.08	$14,072.80
Equip./Install.	Concrete, CIP, slab on grade, reinforced	10	Cubic yard	$253.20	$2,532.00
Equip./Install.	Earthfill, Manually Compacted	100	Cubic yard	$4.83	$483.00
Equip./Install.	Hydraulic Excavator, 1 CY	10	Hour	$96.78	$967.80
Labor	Equipment Operators, Heavy	10	Hour	$27.22	$272.20
Mobilization	Mobilization, medium equipment	2	Each	$200.43	$400.86
Mobilization	Mobilization, very small equipment	2	Each	$55.50	$111.00
				Total Cost:	$19,664.70

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$4.39	EQIP-HU	$5.27
EQIP-MRBI	$4.39	EQIP-HUMRBI	$5.27
EQIP-NOI	$4.39	EQIP-HUNOI	$5.27

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Scenario # 10 Concrete Tank Open Top - <5,000 Cu Ft Storage

Scenario Description: **Missouri**

This scenario consists of installing an open top concrete tank with or without a full width ramp that has a design storage volume less than 5,000 Cu Ft. Payment includes materials and equipment necessary for construction of the concrete tank. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). Tank can also be installed under an animal facility using slats. Design volume does not include freeboard. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Payment includes all materials, equipment and labor to install a concrete tank and gravel for drainfill around the tank.
Potential Associated Practices: Pond Sealing or Lining, Bentonite Sealant (521C), Pond Sealing or Lining, Compacted Clay Treatment (521D), Pond Sealing or Lining, Flexible Membrane (521A), Pond Sealing or Lining, Soil Dispersant (521B), Fence (382), Critical Area Planting (342), Nutrient Management (590), Access Road (560), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Diversion (362), Subsurface Drain (606), and Underground Outlet (620).

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan. Tank typically 5' deep, with a bottom area of 880 sq ft, and a design storage colume of 3520 cu ft plus 1 ft freeboard. Sizing based on manure, other wastes, rainfall, lot runoff, etc. as appropriate. Volume does not include 1 ft of freeboard.

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	3520	Cubic Foot	Tot Unit Cost	$5.71

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waterstop, PVC, ribbed, 3/16" x 6"	186.5	Foot	$4.60	$857.90
Materials	Aggregate, Gravel, Graded	53	Cubic yard	$24.76	$1,312.28
Equip./Install.	Concrete, CIP, formed reinforced	15.2	Cubic yard	$402.08	$6,111.62
Equip./Install.	Concrete, CIP, slab on grade, reinforced	25.7	Cubic yard	$253.20	$6,507.24
Equip./Install.	Earthfill, Manually Compacted	200	Cubic yard	$4.83	$966.00
Equip./Install.	Hydraulic Excavator, 1 CY	30	Hour	$96.78	$2,903.40
Labor	Equipment Operators, Heavy	30	Hour	$27.22	$816.60
Mobilization	Mobilization, medium equipment	2	Each	$200.43	$400.86
Mobilization	Mobilization, very small equipment	4	Each	$55.50	$222.00
				Total Cost:	$20,097.90

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$4.28	EQIP-HU	$5.14
EQIP-MRBI	$4.28	EQIP-HUMRBI	$5.14
EQIP-NOI	$4.28	EQIP-HUNOI	$5.14

Practice: 313 - Waste Storage Facility

Scenario # 11 Concrete Tank Open Top - 5,000 - 14,999 Cu Ft Storage

Scenario Description: **Missouri**

This scenario consists of installing an open top concrete tank that has a design storage volume from 5,000 to 14,999 Cu Ft. Payment includes materials and equipment necessary for construction of the concrete tank. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). Tank can also be installed under an animal facility using slats. Design volume does not include freeboard. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Payment includes all materials, equipment and labor to install a concrete tank and gravel for drainfill around the tank.

Potential Associated Practices: Pond Sealing or Lining, Bentonite Sealant (521C), Pond Sealing or Lining, Compacted Clay Treatment (521D), Pond Sealing or Lining, Flexible Membrane (521A), Pond Sealing or Lining, Soil Dispersant (521B), Fence (382), Critical Area Planting (342), Nutrient Management (590), Access Road (560), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Diversion (362), Subsurface Drain (606), and Underground Outlet (620).

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan. Tank typically 8' deep, with a bottom area of 1256 SF, and a design storage volume of 8,800 cubic feet plus 1 ft freeboard. Sizing based on manure, other wastes, rainfall, lot runoff, etc. as appropriate. Volume does not include 1 ft of freeboard.

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	8800	Cubic Foot	Tot Unit Cost	$2.75

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waterstop, PVC, ribbed, 3/16" x 6"	125	Foot	$4.60	$575.00
Materials	Aggregate, Gravel, Graded	48	Cubic yard	$24.76	$1,188.48
Equip./Install.	Concrete, CIP, formed reinforced	28	Cubic yard	$402.08	$11,258.24
Equip./Install.	Concrete, CIP, slab on grade, reinforced	20	Cubic yard	$253.20	$5,064.00
Equip./Install.	Earthfill, Manually Compacted	200	Cubic yard	$4.83	$966.00
Equip./Install.	Hydraulic Excavator, 1 CY	30	Hour	$96.78	$2,903.40
Labor	Equipment Operators, Heavy	30	Hour	$27.22	$816.60
Mobilization	Mobilization, medium equipment	4	Each	$200.43	$801.72
Mobilization	Mobilization, very small equipment	12	Each	$55.50	$666.00
				Total Cost:	$24,239.44

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$2.07	EQIP-HU	$2.48
EQIP-MRBI	$2.07	EQIP-HUMRBI	$2.48
EQIP-NOI	$2.07	EQIP-HUNOI	$2.48

Practice: 313 - Waste Storage Facility

Scenario # 12 Concrete Tank Open Top - 15,000 - 24,999 Cu Ft Storage

Scenario Description: **Missouri**

This scenario consists of installing an open top concrete tank that has a design storage volume from 15,000 to 24,999 Cu Ft. Payment includes materials and equipment necessary for construction of the concrete tank. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). Tank can also be installed under an animal facility using slats. The design volume does not include freeboard. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Payment includes all materials, equipment and labor to install a concrete tank and gravel for drainfill around the tank.

Potential Associated Practices: Pond Sealing or Lining, Bentonite Sealant (521C), Pond Sealing or Lining, Compacted Clay Treatment (521D), Pond Sealing or Lining, Flexible Membrane (521A), Pond Sealing or Lining, Soil Dispersant (521B), Fence (382), Critical Area Planting (342), Nutrient Management (590), Access Road (560), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Diversion (362), Subsurface Drain (606), Pumping Plant (533) and Underground Outlet (620).

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan. Tank is typically 8 ft deep, with a bottom area of 2,670 sq.ft., and a design storage volume of 18,700 cubic feet plus 1 ft freeboard. Size based on design volume of manure, other wastes, rainfall, lot runoff, etc as appropriate and does not include the 1 ft of freeboard.

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	18700	Cubic Foot	Tot Unit Cost	$2.11

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waterstop, PVC, ribbed, 3/16" x 6"	183	Foot	$4.60	$841.80
Materials	Aggregate, Gravel, Graded	80	Cubic yard	$24.76	$1,980.80
Equip./Install.	Concrete, CIP, formed reinforced	40	Cubic yard	$402.08	$16,083.20
Equip./Install.	Concrete, CIP, slab on grade, reinforced	53	Cubic yard	$253.20	$13,419.60
Equip./Install.	Earthfill, Manually Compacted	240	Cubic yard	$4.83	$1,159.20
Equip./Install.	Hydraulic Excavator, 1 CY	40	Hour	$96.78	$3,871.20
Labor	Equipment Operators, Heavy	40	Hour	$27.22	$1,088.80
Mobilization	Mobilization, medium equipment	2	Each	$200.43	$400.86
Mobilization	Mobilization, very small equipment	12	Each	$55.50	$666.00
				Total Cost:	$39,511.46

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$1.58	EQIP-HU	$1.90
EQIP-MRBI	$1.58	EQIP-HUMRBI	$1.90
EQIP-NOI	$1.58	EQIP-HUNOI	$1.90

Practice: 313 - Waste Storage Facility

Scenario # 13 Concrete Tank Open Top - 25,000 - 49,999 Cu Ft Storage

Scenario Description: **Missouri**

This scenario consists of installing an open top concrete tank that has a design storage volume from 25,000 to 49,999 Cu Ft. Payment includes materials and equipment necessary for construction of the concrete tank. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). Tank can also be installed under an animal facility using slats. The design volume does not include freeboard. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Payment includes all materials, equipment and labor to install a concrete tank and gravel for drainfill around the tank.

Potential Associated Practices: Pond Sealing or Lining, Bentonite Sealant (521C), Pond Sealing or Lining, Compacted Clay Treatment (521D), Pond Sealing or Lining, Flexible Membrane (521A), Pond Sealing or Lining, Soil Dispersant (521B), Fence (382), Critical Area Planting (342), Nutrient Management (590), Access Road (560), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Diversion (362), Subsurface Drain (606), and Underground Outlet (620).

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan. Tank installed is 8' deep, with an interior bottom area of 3,786 SF, and a design storage volume of 26,500 cubic feet plus 1 ft freeboard. Outside dimensions, 4,225 sq ft (includes 3' footing and 8" wall). Size based on manure, other wastes, rainfall, lot runoff, etc as appropriate. Calculated volume for scenario does not include the 1 ft of freeboard.

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	26500	Cubic Foot	Tot Unit Cost	$2.03

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waterstop, PVC, ribbed, 3/16" x 6"	248	Foot	$4.60	$1,140.80
Materials	Aggregate, Gravel, Graded	126	Cubic yard	$24.76	$3,119.76
Equip./Install.	Concrete, CIP, formed reinforced	50	Cubic yard	$402.08	$20,104.00
Equip./Install.	Concrete, CIP, slab on grade, reinforced	80	Cubic yard	$253.20	$20,256.00
Equip./Install.	Excavation, common earth, large equipment,	1450	Cubic Yard	$3.49	$5,060.50
Equip./Install.	Earthfill, Manually Compacted	600	Cubic yard	$4.83	$2,898.00
Mobilization	Mobilization, medium equipment	2	Each	$200.43	$400.86
Mobilization	Mobilization, very small equipment	14	Each	$55.50	$777.00
				Total Cost:	$53,756.92

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$1.52	EQIP-HU	$1.83
EQIP-MRBI	$1.52	EQIP-HUMRBI	$1.83
EQIP-NOI	$1.52	EQIP-HUNOI	$1.83

Practice: 313 - Waste Storage Facility

Scenario # 14 Concrete Tank Open Top - 50,000 - 74,999 Cu Ft Storage

Scenario Description: **Missouri**

This scenario consists of installing an open top concrete tank that has a design storage volume from 50,000 to 74,999 Cu Ft. Payment includes materials and equipment necessary for construction of the concrete tank. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). Tank can also be installed under an animal facility using slats. The design volume does not include freeboard. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Payment includes all materials, equipment and labor to install a concrete tank and gravel for drainfill around the tank.

Potential Associated Practices: Pond Sealing or Lining, Bentonite Sealant (521C), Pond Sealing or Lining, Compacted Clay Treatment (521D), Pond Sealing or Lining, Flexible Membrane (521A), Pond Sealing or Lining, Soil Dispersant (521B), Fence (382), Critical Area Planting (342), Nutrient Management (590), Access Road (560), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Diversion (362), Subsurface Drain (606), and Underground Outlet (620).

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan. Tank typically 8' deep, with a bottom area of 8470 SF, and a design storage volume of 59,300 cubic feet plus 1 ft freeboard. Outside dimensions 9,216 sq ft (includes 3' footing and 8" wall). Sizing based on manure, other wastes, rainfall, lot runoff, etc. as appropriate. Volume does not include 1 ft of freeboard.

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	59300	Cubic Foot	Tot Unit Cost	$1.57

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waterstop, PVC, ribbed, 3/16" x 6"	368	Foot	$4.60	$1,692.80
Materials	Aggregate, Gravel, Graded	244	Cubic yard	$24.76	$6,041.44
Equip./Install.	Concrete, CIP, formed reinforced	75	Cubic yard	$402.08	$30,156.00
Equip./Install.	Concrete, CIP, slab on grade, reinforced	160	Cubic yard	$253.20	$40,512.00
Equip./Install.	Excavation, common earth, large equipment,	3000	Cubic Yard	$3.49	$10,470.00
Equip./Install.	Earthfill, Manually Compacted	600	Cubic yard	$4.83	$2,898.00
Mobilization	Mobilization, medium equipment	4	Each	$200.43	$801.72
Mobilization	Mobilization, very small equipment	8	Each	$55.50	$444.00
				Total Cost:	$93,015.96

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$1.18	EQIP-HU	$1.41
EQIP-MRBI	$1.18	EQIP-HUMRBI	$1.41
EQIP-NOI	$1.18	EQIP-HUNOI	$1.41

Practice: 313 - Waste Storage Facility

Scenario # 15 Concrete Tank Open Top - 75,000 - 109,999 Cu Ft Storage

Scenario Description: **Missouri**

This scenario consists of installing an open top concrete tank that has a design storage volume from 75,000 to 109,999 Cu Ft. Payment includes materials and equipment necessary for construction of the concrete tank. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). Tank can also be installed under an animal facility using slats. The design volume does not include freeboard. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Payment includes all materials, equipment and labor to install a concrete tank and gravel for drainfill around the tank.
Potential Associated Practices: Pond Sealing or Lining, Bentonite Sealant (521C), Pond Sealing or Lining, Compacted Clay Treatment (521D), Pond Sealing or Lining, Flexible Membrane (521A), Pond Sealing or Lining, Soil Dispersant (521B), Fence (382), Critical Area Planting (342), Nutrient Management (590), Access Road (560), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Diversion (362), Pipeline (516), Subsurface Drain (606), and Underground Outlet (620).

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Tank typically 8' deep, with a bottom area of 12,642 SF, and a storage capacity of 88,500 cubic feet plus 1 ft freeboard. Outside dimensions 13,456 sq ft (includes 3' footing and 8" wall).Sizing based on manure, other wastes, rainfall, lot runoff, etc. as appropriate. Volume does not include 1 ft of freeboard.

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	88500	Cubic Foot	Tot Unit Cost	$1.40

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waterstop, PVC, ribbed, 3/16" x 6"	450	Foot	$4.60	$2,070.00
Materials	Aggregate, Gravel, Graded	324	Cubic yard	$24.76	$8,022.24
Equip./Install.	Concrete, CIP, formed reinforced	90	Cubic yard	$402.08	$36,187.20
Equip./Install.	Concrete, CIP, slab on grade, reinforced	230	Cubic yard	$253.20	$58,236.00
Equip./Install.	Excavation, common earth, large equipment,	4300	Cubic Yard	$3.49	$15,007.00
Equip./Install.	Earthfill, Manually Compacted	600	Cubic yard	$4.83	$2,898.00
Mobilization	Mobilization, medium equipment	6	Each	$200.43	$1,202.58
Mobilization	Mobilization, very small equipment	12	Each	$55.50	$666.00
				Total Cost:	$124,289.02

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$1.05	EQIP-HU	$1.26
EQIP-MRBI	$1.05	EQIP-HUMRBI	$1.26
EQIP-NOI	$1.05	EQIP-HUNOI	$1.26

Practice: 313 - Waste Storage Facility

Scenario # 16 Concrete Tank Open Top - ≥110,000 Cu Ft Storage

Scenario Description: **Missouri**

This scenario consists of installing an open top concrete tank that has a design storage volume of 110,000 Cu Ft or greater. Payment includes materials and equipment necessary for construction of the concrete tank. If a roof is to be included in the installation refer to Practice Standard 367 - Roofs and Covers. Vehicular and equipment access is addressed in Heavy Use Area Protection (561). Tank can also be installed under an animal facility using slats. The design volume does not include freeboard. This practice will address soil and water quality by reducing the pollution potential to soil, surface water and ground water. Payment includes all materials, equipment and labor to install a concrete tank and gravel for drainfill around the tank.

Potential Associated Practices: Pond Sealing or Lining, Bentonite Sealant (521C), Pond Sealing or Lining, Compacted Clay Treatment (521D), Pond Sealing or Lining, Flexible Membrane (521A), Pond Sealing or Lining, Soil Dispersant (521B), Fence (382), Critical Area Planting (342), Nutrient Management (590), Access Road (560), Waste Transfer (634), Heavy Use Area Protection (561), Roof and Covers (367), Solid/Liquid Waste Separation Facility (632), Diversion (362), Pipeline (516), Subsurface Drain (606), and Underground Outlet (620).

Before Practice Situation:

Manure and other agricultural by-products are not being utilized or controlled in an environmentally safe manner. The wastes are either accumulating at the source, or other location, or are being transported but not properly utilized or disposed of. This situation poses an environmentally threat of excessive nutrients, organics, and pathogens being transported into surface and groundwaters, in addition to the use of excessive amounts of fertilizers.

After Practice Situation:

Manure and other agricultural by-products are being controlled, by the collection at the source, and stored temporarily, at an environmentally suitable location, until such time that they are disposed of or utilized in a proper manner, typically in accordance with a nutrient management plan. Tank typically 8' deep with a bottom area of 21,000 SF and a design storage volume of 147,000 CF plus 1 ft freeboard. Outside dimensions 22,200 sq ft (includes 3' footing and 8" wall).Sizing based on manure, other wastes, rainfall, lot runoff, etc. as appropriate. Sizing based on manure, other wastes, rainfall, lot runoff, etc. as appropriate. Volume does not include 1 ft of freeboard.

Scenario Feature Measure:

Design Storage Volume

Scenario Typical Size:	147000	Cubic Foot	Tot Unit Cost	$1.23

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Waterstop, PVC, ribbed, 3/16" x 6"	580	Foot	$4.60	$2,668.00
Materials	Aggregate, Gravel, Graded	514	Cubic yard	$24.76	$12,726.64
Equip./Install.	Concrete, CIP, formed reinforced	116	Cubic yard	$402.08	$46,641.28
Equip./Install.	Concrete, CIP, slab on grade, reinforced	370	Cubic yard	$253.20	$93,684.00
Equip./Install.	Excavation, common earth, large equipment,	4300	Cubic Yard	$3.49	$15,007.00
Equip./Install.	Earthfill, Manually Compacted	1660	Cubic yard	$4.83	$8,017.80
Mobilization	Mobilization, medium equipment	6	Each	$200.43	$1,202.58
Mobilization	Mobilization, very small equipment	20	Each	$55.50	$1,110.00
				Total Cost:	$181,057.30

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$0.92	EQIP-HU	$1.11
EQIP-MRBI	$0.92	EQIP-HUMRBI	$1.11
EQIP-NOI	$0.92	EQIP-HUNOI	$1.11